

DOCUMENT RESUME

ED 147 008

PS 009 636

AUTHOR Hapkiewicz, Walter G.
 TITLE Cartoon Violence and Children's Aggression: A Critical Review.
 PUB DATE Aug 77
 NOTE 17p.; Paper presented at the Annual Meeting of the American Psychological Association (85th, San Francisco, California, August 26-30, 1977) ; Best copy available

EDRS PRICE MF-\$0.83 HC-\$1.67 Plus Postage.
 DESCRIPTORS *Aggression; Animation; Anti Social Behavior; *Cartoons; *Childrens Television; Comedy; Drama; Early Childhood Education; *Literature Reviews; Predictor Variables; *Television Research; *Violence

ABSTRACT

This paper reviews ten studies on the effects of television cartoon violence on aggressive behavior in children and discusses possible reasons for the inconsistent results. Methodology and results of field and laboratory studies are compared, and study limitations are noted. The impact of cartoons is discussed in terms of human vs. animal characters and real vs. animated filming. In four of these studies, the predicted anti-social effect of viewing violent cartoons was not confirmed. A review of the remaining reports indicated that there may be plausible alternatives to the interpretations suggested by the investigators. Problems associated with interpreting research on children's viewing of aggressive cartoons are discussed. (SB)

 * Documents acquired by ERIC include many informal unpublished *
 * materials not available from other sources. ERIC makes every effort *
 * to obtain the best copy available. Nevertheless, items of marginal *
 * reproducibility are often encountered and this affects the quality *
 * of the microfiche and hardcopy reproductions ERIC makes available *
 * via the ERIC Document Reproduction Service (EDRS). EDRS is not *
 * responsible for the quality of the original document. Reproductions *
 * supplied by EDRS are the best that can be made from the original. *

ED147008

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

Cartoon Violence and Children's Aggression:
A Critical Review

Walter G. Hapkiewicz
Michigan State University

Paper presented at the
American Psychological
Association Convention
San Francisco, Calif.
August, 1977

BEST COPY AVAILABLE

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Walter G. Hapkiewicz

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC) AND
USERS OF THE ERIC SYSTEM."

PS 009636

CARTOON VIOLENCE AND CHILDREN' AGGRESSION:

A CRITICAL REVIEW

An extensive amount of research has now been conducted on the effects of television violence on human behavior. The general conclusion of this research is that viewing violence increases the aggressive behavior of the viewer. This paper is primarily concerned with one aspect of that research -- Violent Cartoons. Despite the widespread public concern for "murder on Saturday morning" only 10 published studies were found. In four of these studies the predicted anti-social effect of viewing violent cartoons was not confirmed. A careful review of the remaining reports revealed that there are plausible alternatives to the interpretations suggested by the investigators.

CARTOON VIOLENCE AND CHILDREN'S AGGRESSION:

A CRITICAL REVIEW

An extensive amount of research has now been conducted on the effects of television violence on human behavior. The general conclusion of this research is that viewing violence increases, rather than decreases, the aggressive behavior of the viewer. This paper is primarily concerned with one aspect of that research -- violent cartoons. Researchers have concluded that "At this stage, there is no reason to think that cartoons have less effect than films of people (Stein and Friedrich, 1975; p. 222-223)." However, a careful examination of published research reveals that there is evidence to support the view that fictional cartoons have considerably less impact on children than films of real people.

First it should be noted that studies of violent cartoons are primarily concerned with performance rather than learning effects. Learning effects refer to the addition of a new response to a person's repertoire (Bandura, 1973) while investigations of performance effects attempt to identify the conditions that lead people to activate behaviors that are already part of their repertoire. In studies of aggression the expression of previously learned assaultive behaviors in new or similar situations is most commonly called a "disinhibition effect." Disinhibition effects are most important in studies of cartoon violence because it is often impossible for the viewer to model the novel responses displayed by imaginary characters in imaginary situations. Bandura has stated that a complete understanding of aggression requires research on both learning and performance and that studies of disinhibition effects fur-

ther require the use of human targets. People must be provided with the opportunity to hurt others, using behaviors previously learned for injurious purposes, in order to explain what causes people to act aggressively (Bandura, 1973). This latter requirement is particularly important in evaluating the research on aggressive cartoons.

The studies that have investigated the effect of viewing violent cartoons on children's aggressive behavior are listed in Table 1. Included are both laboratory and field studies using children of various ages and various types of dependent variables. The presence or absence of treatment effects are also noted. Brief inspection of Table 1 reveals that discrepant findings have occurred. My purpose here is to review this research in detail and then discuss possible reasons for the inconsistent results.

Laboratory Studies

Several laboratory studies have used interpersonal assaultiveness as a dependent measure in assessing the effects of cartoons. The earliest of these was conducted by Siegel (1956). In this study each child was paired with another child by the teacher for both viewing and observation purposes. All children viewed both the violent and non-violent cartoon one week apart with half the pairs observing the violent film first and half viewing the non-violent film first. Thus, sequence effects were randomized and the effects of age, experience, and background were controlled by using each child as his own control. No significant cartoon effects were found on measures of aggression toward another child, toys, or self during free play.

Two other studies which used physical aggression toward a peer-partner

also failed to find an increase in aggression after viewing violent cartoons. Hapkiewicz and Roden (1971) used the same cartoon character (although not the same film) as Siegel (1956). Subjects were not used as their own control but were randomly paired with classmates of the same sex. Unlike the Siegel (1956) study in which a larger number of toys were available to the children in the testing situation, there was only one activity available -- a "peep show." Since only one child could see the "peep show" at a time, each child had three choices: 1) move his partner away; 2) keep from being moved himself; or 3) arrange a strategy to share the activity. Although children who viewed the aggressive cartoons did not exhibit more aggressive behavior, the boys who viewed the aggressive film shared significantly less than their counterparts in the control condition. In a follow-up study (Hapkiewicz and Stone 1974) the sex by treatment sharing effect did not replicate but once again children who observed aggressive cartoons did not express more aggression in interpersonal play than children who viewed a neutral film. This was in contrast to the effects of viewing a real-life aggressive film (Three Stooges). Boys who viewed this film exhibited significantly more assaultive behavior toward their peers than boys who viewed either the aggressive cartoon or a neutral film. Such selective effects on the boys were easily explained since the aggressive models depicted in the film were males.

Each of the preceding studies failed to detect the disinhibition effect that would be predicted from Bandura's social learning theory (1973). These findings differ considerably from other laboratory studies in which aggression toward inanimate objects was used as the dependent variable. Mussen and Rutherford (1961) found that children were more likely to verbally express a desire to pop a balloon after exposure to a cartoon that depicted aggression between animated flowers and animals. In two experiments Lovaas (1961) found that violent cartoons did not increase children's play with an aggressive toy above operant level. However, in a third experiment children selected to play with an aggressive toy more frequently than a non-aggressive toy after viewing the violent cartoon. Bandura, Ross, and Ross (1963) reported that while a cartoon figure was less effective in teaching new responses than a real-life character it was equally effective in reducing children's inhibitions against performing assaultive acts that they had previously acquired. In all cases the aggressive behavior was directed toward a plastic doll. One possible limitation to generalizing from this study to other cartoon research is that the cartoon model was actually a person costumed as a cat. While each of the studies reviewed above reported disinhibition of aggressive verbalizations, preferences, or motoric responses following exposure to violent cartoons the aggressive acts were all directed toward inanimate objects rather than other persons.

Field Studies

All of the studies reviewed to this point were laboratory studies in which exposure to the violent film fare was of very short duration. Several field studies have also been conducted in which children received

heavy doses of actual cartoon violence and their assaultive behavior toward peers observed in classroom or play situations. One such study was reported by Steuer, Applefield, and Smith (1971). Each of five pairs of children were systematically observed in experimental rooms to gather baseline data on frequency of interpersonal assaultiveness. One child in each pair was then exposed to 50 minutes of film violence over a five day period while his partner viewed a non-aggressive film. Three of the five children who viewed the aggressive films exhibited considerable increases in physical assaultiveness toward their peer partner. However, a major problem in this study was the aggressive treatment stimulus. The authors state that "Television materials were selected from Saturday Morning children's program offerings. They featured various human and animated cartoon characters, with a preponderance of cartoons (p. 445)." What is a "preponderance of cartoons?" Could the use of aggressive human characters alone account for the results? This is an important question because it is well known that short exposure to violent interactions among real-life characters will produce disinhibition effects (Hapkiewicz and Stone, 1974).

Another study that investigated the effects of violent cartoons was conducted by Ellis and Sekyra (1972). Although the children were only subjected to five minutes of violent cartoons they exhibited significantly more aggression toward their classmates than those who viewed either a neutral film or participated in a discussion group. Unfortunately only total aggression scores were reported. These scores included physical aggression (e.g., kicking and pushing), noncontact physical behavior (e.g., facial and body gestures) and verbal assaults (e.g., name calling and

shouting). It is impossible to determine if the cartoon violence simply produced more shouting and facial grimaces or more physically hurtful behavior. Furthermore, replication of the investigation is precluded because film titles were not reported.

A more exhaustive field study was conducted by Friedrich and Stein (1973). Nursery school children were exposed to cartoon versions of Batman and Superman over a four week period and their interactions with peers was systematically observed and recorded. Observations were collected for three weeks prior to exposure, four weeks during the treatment period, and for two weeks in the post viewing session. In addition to recording verbal and physical assaults the authors also recorded positive social behaviors such as cooperation, task persistence, and self-control. Children who viewed the violent cartoons were then compared to children who had watched prosocial programs (Mister Roger's Neighborhood) or neutral films. Results revealed that children who were initially above average in aggressiveness were more verbally and physically assaultive after viewing the violent cartoons than those who had seen prosocial or neutral films. Cartoon violence had no effect on children who were below average in aggressiveness. This latter finding raises questions about the hypothesis that prolonged exposure to cartoon violence is all that is necessary to produce behavioral effects. Four weeks of exposure was not sufficient to overcome aggression inhibitions in children who were rated as below average in aggression proneness. Further, for those children in the high-aggression group the violent films served to maintain the initial levels of a assaultive behavior but did not produce increased interpersonal attacks above baseline. Significant differences

between the aggressive and control conditions were primarily attributable to a decrease in the expression of aggression by the control subjects. The authors carefully noted these limitations (p. 34) but it is almost certain that these points will be lost in subsequent reviews of research on television and aggression. Friedrich and Stein (1973) also point out that aggressive behavior and prosocial behavior were positively correlated. This raises the possibility "...that some children are simply more actively social than others; they manifest more of all types of interpersonal behavior (p. 44)." If this is so then is it possible that the violent cartoons simply increased the activity level of the children? Unfortunately it is not possible to answer this question because the prosocial data were analyzed using SES (high vs. low) as the independent variable and the aggression data was analyzed using initial level of aggressiveness (above or below average) as the independent variable. Since these two response domains were positively correlated it is plausible that children in the high aggression group were also high in prosocial behavior. The "actively level" hypothesis would be supported if a re-analysis showed that children who were high in aggressiveness also exhibited significantly more prosocial behavior following exposure to the violent film fare than children who were initially low in aggressiveness. Since the largest increase in prosocial interpersonal behavior for half the subjects (high SES group) occurred following exposure to the violent cartoons the "activity level" hypothesis appears to be a plausible alternative to the one suggested by the investigators.

Discussion

From the evidence reviewed above it can be seen that there are

numerous problems with interpreting research on children's aggressive cartoons. First, some investigators do not provide adequate descriptions of the treatment stimuli. In at least two studies in which commercial films were used no titles were reported and only brief film descriptions were provided. Do programs like "Woody Woodpecker," "Bugs Bunny," "Spiderman," or "Batman" and "Superman" each have the same effect on children? The one characteristic that each of these films has in common is that they are animated. Animation appears to be the minimum requirement for defining a film sequence as a cartoon. This definition was apparently used by Friedrich and Stein (1973). However, these films differ in that the characters represent either humans (e.g., Batman) or animals (e.g., Woody Woodpecker). It is known that a significant factor in predicting the effects of televised violence is the degree of similarity between the film setting or characters and the viewer's actual surroundings (Bryan and Schwartz, 1971). The magnitude of effect should be predictable from the nature of the stimuli presented. Assuming other conditions are equal (e.g., consequences, justification...), the impact of televised violence should vary as described in Table 2.

For films depicting aggressive interactions amongst humans the effect would be maximum. This prediction is supported by an overwhelming amount of evidence. Observation of aggressive human characters in live situations, on film, in real or fictional presentations, disinhibits assaultive behavior in the viewer (Bandura, 1973). From Table 2, it can be seen that aggression depicted by animated human characters would have intermediate effects on viewers and that the effects of viewing hostile

interchanges amongst animated animal characters would be minimal or inconsequential. This ordering of effect was implied by Friedrich and Stein (1973) in organizing films into viewing patterns. They categorized "Batman" and "Superman" with other violent adult programs rather than other cartoons. They suggested that "Perhaps the portrayal of human characters in these cartoons makes them more like adult violent programs than like other cartoons (p. 28)." This may be an important factor in accounting for the effects reported. Further support for the hypothesized order of effect can be derived from studies of children's emotional reactions to television violence. Osborn and Endsley (1971) found that the emotional impact (measured by galvanic skin response) of cartoon violence to be significantly less than that which resulted from viewing violence portrayed by human characters. Secondly, the emotional reaction to cartoon violence was significantly greater than the reaction to either non-violent human films or non-violent cartoons. Since the violent cartoon used was "Spiderman" the results support the prediction made in Table 2. If the investigators had used animated animal characters as a third level of treatment a more complete test of the hypothesis would be available.

In many of the studies reviewed above the predicted antisocial effect of viewing violent cartoons was not confirmed. While one cannot affirm the null hypothesis the available evidence should not be ignored. Hopefully, additional research on children's cartoons will provide more adequate answers than currently available. This research should include both animated human and animal characters as separate conditions, thorough descriptions of the treatment stimuli (e.g., the name of the

film if commercially available, length of treatment, frequency and type of aggressive interchanges), and multiple dependent variables. Under the latter category studies of children's reactions to aggressive cartoons should include both antisocial and prosocial dependent variables to further test the "activity level" hypothesis as well as to examine other possible deleterious effects of observing violence.

TABLE 1

Author(s)	Type of Study	Violent Cartoon Description	Treatment Duration	Number and Age of Subjects	Dependent Variable	Effect Reported
Bandura, Ross, & Ross, 1963	Laboratory	Human dressed as cat strikes Bobo doll	10 min.	96, 3-5 yrs.	Child strikes Bobo doll	yes
Ellis & Sekura, 1973	Field	Animated football game (no title provided)	5 min.	51 1st grade	Physical and verbal aggression toward peers	yes
Friedrich & Stein, 1973	Field	Batman & Superman cartoons	4 weeks: three sessions of 20 min per wk.	97 3-5 yrs.	Physical and verbal aggression toward peers Prosocial responses	yes
Haplewicz & Roden, 1971	Laboratory	Woody Woodpecker	12 min.	60 6-8 yrs.	Physical and verbal aggression toward peers	no
Haplewicz & Stone, 1974	Laboratory	Mighty Mouse	15 min.	180 6-10 yrs.	Physical and verbal aggression toward peers	no
Lovaas, 1961	Laboratory	Ressling Match (Human-like figures hit and bite)	5 min.	Exp. 1 - 12 5 yrs. Exp. 2 - 20 4-6 yrs. Exp. 3 - 20 4 - 6 yrs.	Activates aggressive toy Activates aggressive toy Selects aggressive toy	no no yes
Mussen & Rutherford, 1961	Laboratory	Weed chokes flower; Panda bear destroys weed	8 min.	26 6-7 yrs.	Verbally expresses desire to pop balloon	yes
Osborn & Endsley, 1971	Laboratory	Spiderman	3 min.	25 4-5 yrs.	GSR	yes
Siegel, 1956	Laboratory	Woody Woodpecker	10 min.	24 3-5 yrs.	Physical aggression toward peer, toy, or self	no
Steier, Apple-Field, & Smith, 1971	Field	Human and animated characters (no title provided)	5 daily sessions of 10 min.	10 3-5 yrs.	Physical aggression toward peers	yes

TABLE 2

Predicted Impact of T.V. Violence

<u>Effect on Viewer</u>	<u>Characters Portrayed</u>	<u>Examples</u>
Maximum	Human Characters (Drama)	Mannix, FBI, Hawaii Five-0
Intermediate	Animated Human Characters (Dramatic Cartoon)	Batman, Super- man, Spiderman
Minimum	Animated Human or Animal Characters (Comedy Car- toon)	Bugs Bunny, Mighty Mouse, Woody Woodpecker

REFERENCES

- Bandura, A., Aggression: A Social Psychological Analysis. Englewood Cliffs, New Jersey: Prentice-Hall, 1973.
- Bandura, A., Ross, D., and Ross, S. A., "Imitation of Film Mediated Aggressive Models," Journal of Abnormal and Social Psychology, 1963, 66:3-11.
- Bryan, J. H. and Schwartz, T., "Effects of Film Material upon Children's Behavior ." Psychological Bulletin, 1971, 75, 50-59.
- Ellis, G. T. and Sekyra, F., "The Effect of Cartoons on the Behavior of First Grade Children," Journal of Psychology, 1972, 81:37-43.
- Friedrich, L. K. and Stein, A. H., Aggressive and prosocial television programs and the natural behavior of preschool children. Monographs of the Society for Research in Child Development, 1973, 38 (4, serial no. 151).
- Hapkiewicz, W. G. and Roden, A. H., "The Effect of Aggressive Cartoons on Children's Interpersonal Play," Child Development, 1971, 42: 1583-1585.
- Hapkiewicz, W. G. and Stone, R. D., "The Effect of Realistic Versus Imaginary Aggressive Models on Children's Interpersonal Play," Child Study Journal, 1974, 4:47-58.
- Lovaas, O. I., "Effect of Exposure to Symbolic Aggression on Aggressive Behavior," Child Development, 1961, 32:37-44.
- Mussen, P. H. and Rutherford, E., "Effects of Aggressive Cartoons on Children's Aggressive Play," Journal of Abnormal and Social Psychology, 1961, 62:461-465.
- Osborn, D. K. and Endsley, R. C., "Emotional Reactions of Young Children to TV Violence," Child Development, 1971, 42:321-331.
- Siegel, A. E., "Film Mediated Fantasy Aggression and Strength of Aggressive Drive," Child Development, 1956, 27:365-378.
- Stein, A. H. and Friedrich, L. K., "Impact of Television on Children and Youth." In E. M. Hetherington (Ed.) Review of Child Development Research: Volume 5. Chicago: University of Chicago Press, 1975.
- Steuer, F. B. and Applefield, and Smith, R., "Televised Aggression and the Interpersonal Aggression of Preschool Children," Journal of Experimental Child Psychology, 1971, 11:442-447.